IN THE CLAIMS:

Please write the claims to read as follows:

Please cancel claims 1-21 without prejudice.

1-21. (Canceled)

Please add new claims 22 *et seq.*:

22. (New) A method for use in an operator initiated graceful takeover in a computer cluster having a first and second computer, the method comprising the steps of:

receiving, at the second computer, an indication that the operator has requested that the second computer take over for the first computer;

requesting, from the second computer, that the first computer shut down;

completing service requests at the first computer pending at the time the first computer was requested to shut down;

transferring responsibilities of the first computer to the second computer; and

shutting down the first computer.

23. (New) The method as in claim 22, further comprising:

generating the indication as an operator request from within the first computer; and

sending the indication from the first computer to the second computer.

24. (New) The method as in claim 22, further comprising: generating the indication as an operator request from within the second computer.

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1 25. (New) The method as in claim 22, further comprising: refusing further service re-
2 quests at the first computer after the first computer was requested to shut down.

1 26. (New) The method as in claim 22, further comprising: transferring access of a stor-
2 age device for the first computer to the second computer.

1 27. (New) The method as in claim 22, further comprising: asserting, at the second com-
2 puter, disk reservations of disks of the first computer.

1 28. (New) The method as in claim 22, further comprising: rerouting file service requests
2 from the first computer to the second computer.

1 29. (New) The method as in claim 22, further comprising: activating, at the second
2 computer, network interfaces and network addresses that replicate those of the first com-
3 puter.

1 30. (New) The method as in claim 22, further comprising: initiating a countdown timer
2 subsequent to the shut down request from the second computer.

1 31. (New) The method as in claim 30, further comprising: forcing the first computer to
2 shut down in the event the first computer is still operating at the expiration of the count-
3 down timer.

32. (New) The method as in claim 22, further comprising: detecting, at the second computer, the shut down of the first computer by the absence of a periodic heartbeat signal.

33. (New) The method as in claim 22, further comprising: storing, at the first computer, state information of the first computer prior to shutting down.

34. (New) The method as in claim 22, further comprising: sending periodic requests from the second computer to the first computer to remain shut down, after the first computer has shut down.

35. (New) The method as in claim 22, further comprising: requesting, from the first computer, that the second computer restore responsibilities of the first computer to the first computer.

36. (New) The method as in claim 22, further comprising: restoring responsibilities of the first computer to the first computer upon restart of the first computer.

37. (New) The method as in claim 22, further comprising: using the first and second computers as a file servers.

38. (New) A storage system capable of performing an operator initiated graceful take-over, the storage system comprising:

a first computer; and

a second computer having a processor to

5   i) receive an indication that the operator has requested that the second

6   computer take over for the first computer,

7   ii) request that the first computer shut down,

8   iii) allow the first computer to complete service requests pending at the

9   time the first computer was requested to shut down,

10   iv) take over any responsibilities of the first computer, and

11   v) allow the first computer to shut down.

1   39. (New) The storage system as in claim 38, further comprising: a processor for the

2   first computer to i) generate the indication as an operator request, and ii) send the indica-

3   tion to the second computer.

1   40. (New) The storage system as in claim 38, further comprising: the processor of the

2   second computer to generate the indication as an operator request.

1   41. (New) The storage system as in claim 38, further comprising: a processor for the

2   first computer to refuse further service requests at the first computer after the first com-

3   puter was requested to shut down.

1   42. (New) The storage system as in claim 38, further comprising:

2   a storage device for the first computer; and

3   an interconnect to transfer access of the storage device for the first computer to

4   the second computer.

1   43. (New) The storage system as in claim 38, further comprising: disks of the first com-

2   puter, the disks to be reserved by the second computer while the first computer is shut

3   down.

1   44. (New) The storage system as in claim 38, further comprising: an interconnect to re-

2   route file service requests from the first computer to the second computer.

1   45. (New) The storage system as in claim 38, further comprising:

2   network interfaces at the first computer;

3   network addresses at the first computer;

4   network interfaces at the second computer that replicate the network interfaces of

5   the first computer; and

6   network addresses at the second computer that replicate the network interfaces of

7   the first computer, the network interfaces and addresses at the second computer that rep-

8   licate the network interfaces and addresses of the first computer to be activated by the

9   second computer while the first computer is shut down.

1   46. (New) The storage system as in claim 38, further comprising: a countdown timer,

2   the countdown timer to be initiated subsequent to the shut down request from the second

3   computer.

1   47. (New) The storage system as in claim 46, further comprising: an interconnect to

2   force the first computer to shut down in the event the first computer is still operating at

3   the expiration of the countdown timer.

48. (New) The storage system as in claim 38, further comprising: an interconnect at the second computer to detect the shut down of the first computer by the absence of a periodic heartbeat signal.

49. (New) The storage system as in claim 38, further comprising: persistent memory at the first computer to store state information of the first computer prior to shutting down.

50. (New) The storage system as in claim 38, further comprising: an interconnect at the second computer to send periodic requests to the first computer to remain shut down, after the first computer has shut down.

51. (New) The storage system as in claim 38, further comprising: a processor for the first computer to request that the second computer restore responsibilities of the first computer to the first computer.

52. (New) The storage system as in claim 38, further comprising: an interconnect to restore responsibilities of the first computer to the first computer upon restart of the first computer.

53. (New) The storage system as in claim 38, further comprising: the first and second computers are file servers.

54. (New) A storage system capable of performing an operator initiated graceful takeover, the storage system comprising:

a first computer;

4   a second computer;

5   means for receiving, at the second computer, an indication that the operator has
6 requested that the second computer take over for the first computer;

7   means for requesting, from the second computer, that the first computer shut
8 down;

9   means for completing service requests at the first computer pending at the time
10 the first computer was requested to shut down;

11   means for transferring responsibilities of the first computer to the second com-
12 puter; and

13   means for shutting down the first computer.

1 55. (New) A computer readable media, comprising: the computer readable media con-
2 taining instructions for execution in a processor for the method of,

3   receiving, at a second computer, an indication that an operator has requested that
4 the second computer take over for a first computer;

5   requesting, from the second computer, that the first computer shut down;

6   completing service requests at the first computer pending at the time the first
7 computer was requested to shut down;

8   transferring responsibilities of the first computer to the second computer; and

9   shutting down the first computer.

1 56. (New) Electromagnetic signals propagating on a computer network, comprising: the
2 electromagnetic signals carrying instructions for execution in a processor for the method
3 of,

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4   receiving, at a second computer, an indication that an operator has requested that

5   the second computer take over for a first computer;

6   requesting, from the second computer, that the first computer shut down;

7   completing service requests at the first computer pending at the time the first

8   computer was requested to shut down;

9   transferring responsibilities of the first computer to the second computer; and

10   shutting down the first computer.